COUNTY: ISLE OF WIGHT **SITE NAME:** HEADON WARREN AND WEST HIGH DOWN SSSI

Local Planning Authorities: Isle of Wight County Council, South Wight Borough Council

National Grid Reference: SZ 316852

Ordnance Survey Sheets 1:50,000: 196 **1:25,000:** SZ 38

Hectares/Acres: 276.25/682.6

Date Notified (1949 Act): 1951 **Date of Last Revision:** 1977

Date Notified (1981 Act): 1984 **Date of Last Revision:** –

Other Information:
Most of the site is owned by the National Trust.

Reasons for Notification:
This site comprises parallel Tertiary and chalk ridges. The former, Headon Warren, supports mainly acid, heath vegetation, and the latter species-rich chalk grassland. The cliffs of Alum Bay to Totland Bay are geologically important as a classic section of the Lower Tertiary (Eocene and Oligocene) strata. The chalk ridge terminates in the chalk stacks known as The Needles and the eroded chalk foundations here are of great geomorphological interest.

Tennyson Down and West High Down are one of a series of chalk and neutral grasslands extending along the main east-west chalk ridge of the Isle of Wight. Collectively and individually they are of great scientific and nature conservation importance for the richness of their chalk grassland plant communities and the juxtaposition of a neutral to acid flora on the superficial drift deposits which cap the ridge. This site includes examples of scrub, grassland and chalk heath, the species composition of which is influenced by maritime conditions. It supports nine species of orchids and large populations of such rare plants as the Early Gentian *Gentianalla anglica* and Tufted Centaury *Centaurium capitatum*. Both scrub and grassland areas include interesting gradations between base-rich and base-poor communities, related to the occurrence of thin superficial drift deposits.

The cliffs of Main Bench, Highdown Cliffs, Scratchell's Bay and The Needles support colonies of Herring Gulls *Larus argentatus*, Cormorants *Phalacrocorax carbo*, Fulmars *Fulmarus glacialis*, Kittiwakes *Rissa tridactyla*, Shags *Phalacrocorax aristotelis* and small populations of Guillemots *Uria aalge*, Razorbills *Alca torda* and Puffins *Fratercula arctica*. Peregrine falcons *Falco peregrinus* recolonised the cliffs in the 1980's.

The cliffs and cliff top grassland support a number of rare and local sea cliff plants including the hoary stock *Matthiola incana* and rock samphire *Crithmum maritimum*.

Headon Warren is one of only two areas of lowland heath in the Isle of Wight. The vegetation is dominated by a heather *Calluna vulgaris*/bell-heather *Erica cinerea*/Dwarf Gorse *Ulex minor* association, with extensive gorse *U. europaeus*, supporting a wide range of heathland plants and invertebrates one of two small breeding populations of Dartford warblers *Sylvia undata* in the Island.

The coastal section from Alum Bay to Totland Bay is one of the most well-known geological localities in Britain and has been studied by geologists for over 170 years. It is of great importance in understanding the geological evolution of the Isle of Wight and the Hampshire Basin, and is complementary to the sites at Whitecliff Bay and Hordle. Within the site is a complete sequence of rocks from the Chalk to the Bembridge Limestone,

containing important faunas of fossil manuals and reptiles; important fossil floras occur at many levels.

The rock sequence provides a complete section from the Reading Clay, which rests unconformably upon the Chalk, up through the Oldhaven Formation, London Clay, Alum Bay Sands, Barton Clay, Barton Sand, Headon Hill Formation and into the Bembridge Limestone Formation. Study of these sediments reveals the continually changing sequence of environments which existed in the western Isle of Wight during Eocene times, and significant environmental differences between this section and sections of similar age at Whitecliff Bay and Hordle can be recognised.

The rocks of the Headon to Bembridge interval are an important source of fossil mammals, 46 species having been recorded so far from five different levels; this is one of the most important localities for fossil mammals in the Tertiary rocks of Europe. The Lower Headon Beds are an important source of fossil reptiles, including turtles, crocodiles, lizards and snakes, and this is therefore an important site for the smaller types of Tertiary reptile.

Fossil plants occur at several horizons within the site, and the flora assemblage which occur are important for reconstructing the vegetation history of the Hampshire Basin during Eocene times. Of particular note is the unique British occurrence of the plant *Celtis*, a form common in Tertiary floras elsewhere in the world, but only found here in Britain; important floras also occur in the Osborne Beds, the Headon Beds and the Barton Sands. The Headon Hills lignite, seen here, is the only extensive organic-rich deposit of this age in Britain.